

WHAT IS CLAIMED IS:

1. A hot-press cushioning material comprising a non-woven fabric formed of a fiber web, characterized in that said fiber web comprises a first component having a relatively low softening temperature and a second component having a relatively high softening temperature, and  
5                   said non-woven fabric is compressed at a temperature which is not lower than the softening temperature of the first component but lower than the softening temperature of the second component.  
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2. A hot-press cushioning material comprising a non-woven fabric formed of a fiber web, characterized in that said fiber web comprises a first component having a softening temperature and a second component having no softening temperature, and  
15                   said non-woven fabric is compressed at the softening temperature of the first component or higher.
3. The hot-press cushioning material according to claim 1, wherein said softening temperature of the first component is lower than a hot-press forming temperature of an object to be pressed and said softening temperature of the second component is higher than the hot-press forming temperature of the object to be pressed.  
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4. The hot-press cushioning material according to claim 2, wherein said softening temperature of the first component is lower than a hot-press forming temperature of an object to be pressed.  
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5. The hot-press cushioning material according to claim 1, wherein said first component is a material selected from a group comprising polyethylene, polypropylene, nylon 6, low-melting polyester, acryl, polyvinyl alcohol, and polyphenylene sulfide, and  
30                   said second component is a material selected from a group comprising nylon 66, polybenzoxazole, polybenzimidazole, polyimide, polyester, polyphenylene sulfide, polytetrafluoroethylene, polyether ether ketone, and phenol.  
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6. The hot-press cushioning material according to claim 2, wherein said first component is a material selected from a group comprising polyethylene, polypropylene, nylon 6, low-melting polyester, acryl, polyvinyl alcohol, and polyphenylene sulfide, and
- 5           said second component is a material selected from a group comprising aromatic polyamide, polyamideimide, polyarylate, metal, carbon, silica, glass, and ceramics.
- 10         7. The hot-press cushioning material according to claim 1, wherein said fiber web is provided such that a first fiber comprising said first component as a main constituent and a second fiber comprising said second component as a main constituent are mixed.
- 15         8. The hot-press cushioning material according to claim 7, wherein a mixture ratio of said first fiber to said second fiber is 5/95 to 70/30 by mass.
- 20         9. The hot-press cushioning material according to claim 7, wherein said first fiber has a core-in-sheath structure consisting of a core part comprising said first component and a coating part comprising said second component.
- 25         10. The hot-press cushioning material according to claim 1, wherein said fiber web comprises a fiber having a core-in-sheath structure consisting of a core part comprising said first component and a coating part comprising said second component.
- 30         11. The hot-press cushioning material according to claim 1, wherein said non-woven fabric is provided such that said fiber web and a woven fabric comprising the equal component as said second component are needlepunched.
12. The hot-press cushioning material according to claim 1, comprising a surface coating material laminated on said non-woven fabric.
- 35         13. A manufacturing method of a hot-press cushioning material

comprising a compressed non-woven fabric, comprising:

a step of preparing a non-woven fabric made of a fiber web comprising a thermoplastic first component having a softening temperature and a heat-resistant second component having a softening temperature higher than the softening temperature of said first component or having no softening temperature;

5 a step of compressing said non-woven fabric at the softening temperature of said first component or higher;

10 a step of cooling said non-woven fabric to a temperature lower than the softening temperature of said first component in a compressed state; and

15 a step of releasing the compressed state of said non-woven fabric after cooled.

14. The manufacturing method of the hot-press cushioning material according to claim 13, wherein said fiber web is provided such that a first fiber comprising said first component as a main constituent and a second fiber comprising said second component as a main constituent are mixed.

20 15. The manufacturing method of the hot-press cushioning material according to claim 14, wherein a mixture ratio of said first fiber to said second fiber is 5/95 to 70/30 by mass.

25 16. The manufacturing method of the hot-press cushioning material according to claim 14, wherein said first fiber has a core-in-sheath structure consisting of a core part comprising said first component and a coating part comprising said second component.

30 17. The manufacturing method of the hot-press cushioning material according to claim 13, wherein said fiber web comprises a fiber having a core-in-sheath structure consisting of a core part comprising said first component and a coating part comprising said second component.

35 18. The manufacturing method of the hot-press cushioning material according to claim 13, wherein said non-woven fabric is provided such that

said fiber web and a woven fabric comprising the equal component as said second component are needlepunched.

5        19. The manufacturing method of the hot-press cushioning material according to claim 13, wherein a surface coating material is laminated on said non-woven fabric to be integrated.

10      20. A manufacturing method of a laminated board comprising a step of heating and pressurizing the laminated board with a flat-plate cushioning material interposed between the laminated board and heating and pressurizing means, characterized in that said cushioning material is the hot-press cushioning material according to claim 1.